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APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 13/687,584 11/28/2012 Piotr Findeisen 83098516 1745 56436 01/08/2018 EXAMINER Hewlett Packard Enterprise HUANG, CHEN-LIANG 3404 E. Harmony Road Mail Stop 79 Fort Collins, CO 80528 ART UNIT PAPER NUMBER 2458

NOTIFICATION DATE DELIVERY MODE

01/08/2018 ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PIOTR FINDEISEN and MICHAEL HAEUPTLE¹

Appeal 2017-008281 Application 13/687,584 Technology Center 2400

Before THU A. DANG, ERIC S. FRAHM, and DENISE M. POTHIER, *Administrative Patent Judges*.

FRAHM, Administrative Patent Judge.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–3, 5–7, and 9–18, which constitute all of the claims pending in the application.² The Examiner rejected claims 1–3, 5–7, and 9–18 under 35 U.S.C. § 101 based on a determination that the claimed invention is directed to non-statutory subject matter. We have jurisdiction under 35 U.S.C. § 6(b). Because we conclude all of the pending claims are drawn to an abstract idea or a combination of abstract ideas that do(es) not transform the nature of the claims into a patent-eligible application, we affirm.

¹ Appellants identify Hewlett Packard Enterprise Development, LP, as the real party in interest. App. Br. 3.

² Claims 4 and 8 have been canceled.

STATEMENT OF THE CASE

Introduction

Appellants state that the described invention relates "a server monitoring tool . . . used to monitor the performance of [a] server system" of a computer network, the server implementing a server application accessible to a remote client system (Spec. ¶ 1). The server monitor collects data associated with server requests "in the form of a uniform resource identifier (URI), such as a uniform resource locator (URL)" (Spec. ¶ 17; see also Fig. 1A).

Claim 1 is illustrative and reproduced below (with the disputed limitations *emphasized*, and formatting added):

1. A non-transitory machine-readable storage medium encoded with instructions executable by a processing resource of a computing device to:

identify, as a variable segment position of a plurality of uniform resource identifiers (URIs), a segment position common to each of the URIs and having a threshold number of different values in the plurality of URIs;

generate a generalized URI for a given one of the URIs, the generalized URI including a generic value in a segment position corresponding to the variable segment position of the given URI;

determine whether a given node of a plurality of nodes of a prefix tree has the threshold number of child nodes, wherein the prefix tree represents at least some of the URIs, each of the plurality of nodes represents a segment of at least one of the URIs, and the given node is associated with a generic server action shared in common among the child nodes of the current given node; and

provide, to a data aggregator, a report associating the generalized URI with performance information related to the given URI, wherein the generalized URI represents the generic server action.

Rejection on Appeal

Claims 1–3, 5–7, and 9–18 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Final Act. 5–8; Ans. 2–11. The Examiner determines that the claims on appeal are drawn to the abstract ideas of comparing and storing information and using rules to identify options (Final Act. 5), organizing information through mathematical correlations (Final Act. 5), and collecting and analyzing data and displaying the results (Ans. 2–3). The Examiner also determines that the claims fail to recite more than generic computer functions routinely used in computer applications (Final Act. 6; Ans. 3–5). The Examiner also finds claims 1–3, 5–7, and 9–18 are allowable if the rejection under 35 U.S.C. § 101 can be overcome (Final Act. 8).

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellants' arguments in the Briefs. For the reasons discussed *infra*, as well as the reasons provided by the Examiner in the Final Rejection (Final Act. 5–8) and the Examiner's Answer (Ans. 2–11), we are not persuaded by Appellants' arguments (App. Br. 11–19; Reply Br. 4–9) that the Examiner erred in rejecting claims 1–3, 5–7, and 9–18 under 35 U.S.C. § 101.

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101

to include an implicit exception: "[1]aws of nature, natural phenomena, and abstract ideas" are not patentable. *See, e.g., Alice Corp. Pty Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in Mayo Collaborative Services v. Prometheus Laboratories, Inc., 566 U.S. 66, 77–79 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." Alice Corp., 134 S. Ct. at 2355. The first step in that analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," id., e.g., to an abstract idea. For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. If the claims are not directed to a patent-ineligible concept, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered "individually and 'as an ordered combination" to determine whether there are additional elements that "transform the nature of the claim' into a patent-eligible application." Alice Corp., 134 S. Ct. at 2355 (quoting Mayo, 566 U.S. at 78). For claims to pass muster, "at step two, an inventive concept must be evident in the claims." RecogniCorp, LLC v. Nintendo Co., 855 F.3d 1322, 1327 (Fed. Cir. 2017).

The Court acknowledged in *Mayo* that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant

technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.

Here, in rejecting the claims under 35 U.S.C. § 101, the Examiner finds that claims 1–3, 5–7, and 9–18 are directed to the abstract ideas of comparing and storing information and using rules to identify options (Final Act. 5), organizing information through mathematical correlations (Final Act. 5), and collecting and analyzing data and displaying the results (Ans. 2–3). The Examiner also finds the claims do not include limitations that are "significantly more" than the abstract idea because the claims do not include an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. Final Act. 6; Ans. 3–5.

Step One of Alice

Regarding step one of *Alice*, *Enfish* held that the "directed to" inquiry asks not whether "the claims *involve* a patent-ineligible concept," but instead whether, "considered in light of the specification, . . . 'their character as a whole is directed to excluded subject matter." *Enfish*, *LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (citation omitted). Regarding improvements to computer-related technology, the Court in *Enfish* held as follows:

We do not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at step two. Indeed, some improvements in computer-related technology when appropriately claimed are undoubtedly not abstract, such as a chip architecture, an LED display, and the like. Nor do we think

that claims directed to software, as opposed to hardware, are inherently abstract and therefore only properly analyzed at the second step of the *Alice* analysis. Software can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route. We thus see no reason to conclude that all claims directed to improvements in computer-related technology, including those directed to software, are abstract and necessarily analyzed at the second step of *Alice*, nor do we believe that *Alice* so directs. Therefore, we find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.

Enfish, 822 F.3d at 1335. Thus, we determine whether the claims "focus on a specific means or method that improves the relevant technology" or are "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." McRO, Inc. v. Bandai Namco Games Am. Inc., 837 F.3d 1299, 1314 (Fed. Cir. 2016).

Examining earlier cases can have a role, especially in deciding whether a concept that claims are found to be directed to is an abstract idea. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) ("Instead of a definition [for what an 'abstract idea' encompasses], then, the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.").

Our reviewing court has concluded that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Additionally, the collection of information and analysis of information (e.g.,

recognizing certain data within the dataset) are also abstract ideas. *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that "collecting information, analyzing it, and displaying certain results of the collection and analysis" are "a familiar class of claims 'directed to' a patent ineligible concept"); *see also In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). Similarly, "collecting, displaying, and manipulating data" is an abstract idea. *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Further, merely combining several abstract ideas does not render the combination any less abstract. *RecogniCorp*, 855 F.3d at 1327 ("Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract."); *see also FairWarning IP*, 839 F.3d at 1094 (determining the pending claims were directed to a combination of abstract ideas).

Here, the identification and node threshold comparison steps (e.g., which are encoded on a storage medium in claim 1) used to provide a report with performance information pertaining to a generic server environment is similar to ideas previously concluded by our reviewing court to be abstract. *See, e.g., Content Extraction*, 776 F.3d at 1347; *Electric Power*, 830 F.3d at 1353; *Intellectual Ventures I*, 850 F.3d at 1340. Additionally, the analysis of the node and URI data by the processors (e.g., claim 7), engines (e.g., claims 7 and 13), and instructions to provide a report is similar to the abstract idea of analyzing data using mathematical algorithms. *See Electric Power*, 830 F.3d at 1353; *see also Digitech Image Techs., LLC v. Elec. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (concluding a process that employs

mathematical algorithms to manipulate existing information to generate additional information is not patent eligible).

Here, the claims, unlike the claims found non-abstract in prior cases, use generic computer technology to perform data collection, analysis, and processing and do not recite an improvement to a particular computer technology. *See, e.g., McRO*, 837 F.3d at 1314–15 (finding claims not abstract because they "focused on a specific asserted improvement in computer animation"). The claims in the instant case concern the abstract ideas of (i) identifying and comparing information and using rules to identify options, (ii) organizing information through mathematical correlations, and (iii) collecting, analyzing data, and reporting the results. As such, the claims before us are directed to the abstract idea of identifying, analyzing, and comparing data to provide a report.

As discussed *supra*, independent claims 1, 7, and 13 are primarily directed to a storage medium, system, and engines for making a threshold comparison and producing a report, which can be implemented with a general-purpose computer making routine server requests with known URIs. In this light, we are not persuaded by Appellants' arguments (App. Br. 11–15; Reply Br. 4–6) that claims 1, 3, 5–7, 9–15, and 18 as a whole are not directed to an abstract idea or combination of abstract ideas.

Step Two of Alice

Because we determine the claims are directed to an abstract idea, we analyze the claims under step two to determine if there are additional limitations that individually, or as an ordered combination, ensure the claims amount to "significantly more" than the abstract idea. *Alice*, 134 S. Ct. at 2357. The implementation of the abstract idea involved must be "more than

[the] performance of 'well-understood, routine, [and] conventional activities previously known to the industry." *Content Extraction*, 776 F.3d at 1347–48 (citation omitted).

"[T]he use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter." *FairWarning IP*, 839 F.3d at 1096 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014)). Additionally, the steps of identifying, analyzing, and comparing data to provide a report are well-known, routine, and conventional activities.

Regarding step two of Alice, Appellants argue that the independent claims recite "significantly more" than any alleged abstract idea(s) because they go beyond conventional computer operations and improve the technology area of providing useful statistics in a report. See generally App. Br. 15–17; Reply Br. 6–8. We are not persuaded by Appellants' arguments. Although the claims recite multiple computer operations such as executing instructions by a processing resource, identifying data, collapsing nodes, generating a generic value, making a threshold comparison concerning generic server actions, and providing a report, they do not provide details of how these operations are performed and, therefore, they do not go beyond conventional computer operations or affect computer server technology. In other words, we are not persuaded that the operations in the claims are an improvement (1) on a computer function or (2) in any other technology or technical field, as opposed to an improvement to the abstract idea(s) of comparing and storing information and using rules to identify options, organizing information through mathematical correlations, collecting and analyzing data, and displaying the results.

Given that the claims are directed to an abstract idea or combination of abstract ideas, the claimed elements "non-transitory machine-readable storage medium," "processing resource," "data aggregator," "uniform resource identifiers (URIs)," "nodes," "generic server action," "system," "engine," "hardware processor" (see, e.g., claims 1, 7, and 13), are not enough to transform the abstract idea into a patent-eligible invention. See Alice, 134 S. Ct. at 2358. Considering the claims elements individually and as an ordered combination, the claims do no more than simply instruct the practitioner to implement the abstract idea on a generic computer or processer. Id. at 2359; Dealertrack, Inc. v. Huber, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) ("Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible.").

More specifically, the numerous claim limitations recite generally the use of a general purpose computer/server/network (105 in Fig. 1) including "a processing resource [110] of a computing device," nodes associated with a generic server action, and "a data aggregator" (claim 1); a system 305 with engines 332–337 (which can be processors) and "a data aggregator" (claim 7); and "a determination engine" 334 and "a data aggregator" (claim 13), which operate to provide a report. Thus, we find the claims are not directed to an improvement to computer functionality, but are directed to an abstract idea and simply provide a report with statistical information about server requests and URIs.

Appellants point to (i) Figure 1A and paragraphs 22 through 34 and paragraph 48 for support of the subject matter recited in claim 1 (*see* App. Br. 7); (ii) Figure 3 and paragraphs 63 through 76 and paragraph 79 for

support of the subject matter recited in claim 7 (*see* App. Br. 7–8); and (iii) Figure 4 and paragraph 79 through 81 for support of the subject matter recited in claim 13 (*see* App. Br. 8–9). Our review of these portions of the Specification reveals only descriptions of generic computing devices, processor(s), and memory elements.

Specifically, Appellants describe Figure 1A as showing a computing device 105 and processing resource 110 operate on instructions located on machine-readable storage medium 120 to produce a report 179 to be sent to a data aggregator (not shown). Spec. ¶ 22. According to Appellants, the "processing resource" 110 is composed of "one processor or multiple processors included in a single computing device or distributed across multiple computing devices," and may be a central processing unit (CPU) or microprocessor "configured to retrieve and execute instructions . . . stored on a machine-readable storage medium" (Spec. ¶ 23). Appellants describe Figure 3 as showing a system 305 with a memory 340 and multiple engines 332–337 (Spec. ¶ 63) used to produce a report 378 and send the report to a data aggregator (not shown) (Spec. ¶ 71). According to Appellants, the "engines 332–337" "may be any combination of hardware and programming to implement the functionalities of the respective engine," and may be implemented using instructions stored on a machine-readable storage medium (Spec. ¶ 64). Appellants describe the system 305 as including a processing resource which may be "one processor or multiple processors included in a single computing device or distributed across multiple computing devices" (Spec. ¶ 64), and "the machine-readable storage medium may include memory such as a hard drive, solid state drive, or the like" (Spec. ¶ 65). Appellants describe Figure 4, which is a flowchart for the method recited in claim 13, as being a method 400 implemented by the system 305 and engines 332–337 shown in Figure 3 (Spec. ¶ 78).

In view of the foregoing, Appellants' contention that the claims on appeal recite "an improvement in computer technology" (Reply Br. 8 (citing Spec. ¶¶ 18–20)) because the claimed invention provides "useful statistics" is not persuasive. Not only have Appellants not shown that the subject matter claimed is implemented by anything other than generic computer hardware and software, but no algorithm is disclosed for processors 105 and 305 or engines 332–337.

Dependent Claims 2, 3, 5, 6, 9–12, 14, and 15

Appellants argue that the Examiner has failed to make a prima facie case of unpatentability as to the dependent claims because the Examiner's identification of an abstract idea in the claims is facially insufficient and conclusory. App. Br. 17–18. There is, however, no requirement that the Examiner provide any such evidence in order to make a prima facie case under § 101. Instead, the Federal Circuit has held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application." *In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (alteration in original). Here, in rejecting claims 2, 3, 5, 6, 9–12, and 14–17 under § 101, the Examiner notified Appellants of the reasons for the rejection "together with such information . . . as may be useful in judging of the propriety of continuing the prosecution of [the] application." 35 U.S.C. § 132. Although Appellants also argue the Examiner failed to make a prima

facie case by only generally addressing the language of the claims (*see* App. Br. 17–18), we note the Examiner did address each independent claim. *See* Final Act. 6–7; *see also* Ans. 2–3, 6–8. The Examiner states a general, and adequate, rationale that applies to storage medium claim 1 and system claim 7, as well as method claim 13. Thus, we find that the Examiner set forth a prima facie case of unpatentability.

Lack of a Prior Art Rejection

Appellants argue (Reply Br. 8) that the claims pass muster under *Alice* step two because there is no pending rejection over prior art (such as Webmasters, a web analytics tool discussed at Ans. 8–9).

Notwithstanding that "the § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap," . . . a claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 90). The question in step two of the *Alice* framework is not whether an additional feature is novel but whether the implementation of the abstract idea involved "more than [the] performance of 'well-understood, routine, [and] conventional activities previously known to the industry." *Content Extraction*, 776 F.3d at 1347–48 (quoting *Alice*, 134 S. Ct. at 2359).

Claim limitations found to be novel and/or nonobvious can affect a patent-eligibility determination. *Cf. Ariosa Diagnostics, Inc., v. Sequenom, Inc.*, 788 F.3d 1371, 1377 (Fed. Cir. 2015) ("For process claims that encompass natural phenomenon, the process steps are the additional features that must be new and useful."). Thus, novelty is a factor to be considered when determining "whether the claims contain an 'inventive concept' to 'transform' the claimed abstract idea into patent-eligible subject matter."

Ultramercial, Inc. v. Hutu, LLC, 772 F.3d 709, 715 (Fed. Cir. 2014). "[N]ovelty in implementation of the idea is a factor to be considered only in the second step of the Alice analysis." Id. Furthermore, a determination that the prior art does not disclose all the limitations of or render obvious the claims "does not resolve the question of whether the claims embody an inventive concept at the second step of Mayo/Alice." Intellectual Ventures I LLC v. Symantec Corp., 838 F.3d 1307, 1315 (Fed. Cir. 2016). Nor does a finding of obviousness necessarily lead to the conclusion that subject matter is patentable ineligible. See also Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc., 827 F.3d 1042, 1051 (Fed. Cir. 2016) ("That each of the claims' individual steps (freezing, thawing, and separating) were known independently in the art does not make the claim unpatentable."). "[P]atenteligibility does not turn on ease of execution or obviousness of application. Those are questions that are examined under separate provisions of the Patent Act." Id. at 1052 (citing Mayo, 566 U.S. at 90).

However, a finding of novelty or nonobviousness does not necessarily lead to the conclusion that subject matter is patentable eligible. "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013).

In this light, Appellants have not shown the novel features transform the abstract idea into patent-eligible subject matter, and Appellants' argument (Reply Br. 8) that the claims pass muster under *Alice* step two because there is no pending rejection over prior art is not persuasive.

Preemption

We are not persuaded by Appellants' conclusory argument (App. Br. 16) that the claims do not preempt others from the whole field of servers operating on URIs. Preemption is not a separate test, but is inherently addressed within the *Alice* framework. *See Ariosa*, 788 F.3d at 1379 ("While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.").

Summary

Accordingly, we sustain the Examiner's rejection under 35 U.S.C. § 101 of independent claims 1, 7, and 13, as well as dependent claims 3, 5, 6, 9–12, 14, 15, and 18 not argued separately, except based on their dependence on each respective independent claim.

Claims 2, 16, and 17 Separately Argued

Dependent claims 2, 16, and 17 recite the additional requirement that the performance information of claim 1 include "a server request latency" (claim 2), "CPU consumption" (claim 16), or "a record of an exception or error code" (claim 17). These types of performance information are also an abstract idea or combination of abstract ideas implemented by generic servers that are merely a derivative of the act of operating on and displaying performance information. Therefore, for this additional reason, we are not persuaded by Appellants' separate arguments (App. Br. 18) that the types of performance information recited in claims 2, 16, and 17 allow for improvement of latency or CPU consumption of servers. Indeed, claims 2, 16, and 17 do not positively recite a step of actually changing or improving latency or CPU consumption, these claims merely recite providing a report with the performance information about generic server actions.

Accordingly, we also sustain the Examiner's rejection under 35 U.S.C. § 101 of dependent claims 2, 16, and 17.

CONCLUSION

Claims 1–3, 5–7, and 9–18 are drawn to a combination of abstract ideas that are patent ineligible. None of the claims on appeal include limitations that are "significantly more" than the combination of abstract ideas because the claims do not include an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of the abstract ideas to a server environment.

DECISION

We affirm the Examiner's decision rejecting claims 1–3, 5–7, and 9–18 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED